CLAIMS

1. Automated decoring system, characterised in that it comprises a plurality of decoring devices each comprising a frame (1) in the form of a two pronged (11, 12) fork, the space (13) between said prongs (11, 12) being intended to receive a part to be decored, and each of the aforementioned decoring devices is enclosed in a chamber (19) having only one loading door (20), and in that the plurality of decoring devices is disposed within the operating radius of a loading robot (21) which is provided to load the part to be decored through a single face of the decoring device into the space (13) provided for said purpose.

2. Decoring device of the decoring system according to claim 1, characterised in that the frame (1) has a single space (13) allowing to receive a part to be decored, this space (13) being located at one of the ends of the frame (1), in that the frame (1) is supported by four elastic suspension units (2) with a substantially vertical axis and transversally distortable, each suspension unit (2) being integral with a base (3), in that the frame (1) is vibration driven by two unbalanced motors (4) with a substantially vertical axis, each attached to one side of the frame (1) in the vicinity of two of the elastic suspension units (2), and in that a device for tightening the part to be decored is assembled on one (11) of the prongs (11, 12) of the frame (1), said tightening device being constituted of a cylinder (5) onto which is assembled a tightening plate (6), allowing to tighten the part to be decored between the plate (6) and the inner surface of the other prong (12), the other two elastic suspension units (2) being positioned so that the centre of gravity of the loaded decoring device remains between the attachment points of the four suspension units (2), so that they substantially support the same mass.

3. Decoring device according to claim 2, characterised in that the frame (1) is substantially horizontal, the other two elastic suspension units (2) being positioned in the vicinity of the space (13) between the two prongs (11, 12) of the frame (1) and in that the motors (4) revolve in the same direction,

rotating the frame (1) about the axis (z-z) located at the intersection between the middle plane (y-z) of the motors and the transversal plane (x-z) of the frame (1).

4. Decoring device according to claim 3, characterised in that an opening (125) is made in the prong (12) of the frame (1) that does not bear the cylinder (5), this opening (125) receiving the end of at least one pneumatic hammer (7), attached to at least one upright (8) integral with the base (3), which allows to hammer the part to be decored when the latter is clamped within the frame (1), so as to disintegrate the cores of cast.

5. Decoring device according to claim 3 or 4, characterised in that the space (13) between the prongs (11, 12) of the frame (1) comprises a bottom with an opening (135), so as to facilitate both the tightening of the part to be decored and the evacuating of the sand from the frame (1).

6. Decoring device according to one of claims 3 to 5, characterised in that it comprises two pairs of lateral springs (9) with a substantially horizontal axis, integral with both the frame (1) and an upright (10) attached to the base (3), allowing to match the resonance of the frame.

7. Decoring device according to claim 3, characterised in that the frame (1) is constituted of a body (14) and a head (15), the head (15) comprising the two prongs (11, 12) of the frame and being integral with a rod (16) passing through the body (14) of the frame (1) and being driven in rotation about the axis (x-x) of the frame (1) by a motor (18).

8. Decoring device according to claim 2, characterised in that the frame (1) is substantially vertical and in that the motors (4) revolve in opposite directions, generating an alternative translation movement of the frame (1) along the axis (x-x) located at the intersection with the middle plane (x-z) of the frame (1) and the transversal plane (x-y) of the motors (4) passing through the centre of the motors.

9. Decoring device according to claim 8, characterised in that it comprises at least a pair of pneumatic hammers (7), attached to at least one

upright (8) integral with the base, which allows to hammer the part to be decored on either side of the frame when the latter is clamped within the space (13) between the two prongs (11, 12) of the frame (1), so as to disintegrate the cores of cast.

10. Decoring device according to one of claims 2 to 9, characterised in that the tightening plate (6) is fitted with an air propulsion system to help evacuate the sand from the part to be decored.